

User's manual (short)



NVR-3304

NVR-3308

NVR-3326

NoVus[®]

IMPORTANT SAFEGUARDS AND WARNINGS

EMC (2004/108/EC) and LVD (2006/95/EC) Directives CE Marking

Our products are manufactured to comply with requirements of following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.



WEEE Directive 2002/96/EC Information on Disposal for Users of Waste Electrical and Electronic Equipment

This appliance is marked according to the European Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for the waste electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

RoHS Directive 2002/95/EC



Concerning for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, were designed and manufactured in compliance with mentioned regulation. Simultaneously, we claim that our products were tested and do not contain hazardous substances exceeding limits which could have negative impact on human health or natural environment.

Information

The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge. The manufacturer is not responsible for defects and damages resulted from improper or inconsistent with user's manual installation of the device in the system.

ATTENTION!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT PROVISIONED FOR THE GIVEN PRODUCT IN ITS USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR THAT ARISES FROM THE NORMAL APPLICATION OF THE PRODUCT, ITS MANUFACTURER MUST BE CONTACTED OR THE RESPONSIBILITY OF THE MANUFACTURER FOR THE RESULTS OF SUCH AN ACTION SHELL BE EXCLUDED.

1. Prior to undertaking any action please consult the following manual and read all the safety and operating instructions before starting the device.
2. Please keep this manual for the lifespan of the device in case referring to the contents of this manual is necessary;
3. All the safety precautions referred to in this manual should be strictly followed, as they have a direct influence on user's safety and durability and reliability of the device;
4. All actions conducted by the servicemen and users must be accomplished in accordance with the user's manual;
5. The device should be disconnected from power sources during maintenance procedures;
6. Usage of additional devices and components neither provided nor recommended by the producer is forbidden;
7. You are not allowed to use the device in high humidity environment (i.e. close to swimming pools, bath tubs, damp basements);
8. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself as a consequence;
9. Mounting the device on unstable surface or using not recommended mounts is forbidden. Improperly mounted device may cause a fatal accident or may be seriously damaged itself. The device must be mounted by qualified personnel with proper authorization, in accordance with this user's manual.
10. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the devices technical datasheet. Therefore, it is forbidden to supply the devices from a power sources with unknown parameters, unstable or not meeting producer's requirements;
11. You cannot allow any metal objects get inside the recorder. It might cause serious damage. If a metal object gets inside the device contact the authorised Novus service immediately.
12. The manufacturer does not bear responsibility for damage or loss of data stored on HDDs or other media occurred during the usage of the product.

Due to the product being constantly enhanced and optimized, certain parameters and functions described in the manual in question may change without further notice.

We strongly suggest visiting the www.novuscctv.com website in order to access the newest manual.

Technical changes reserved without prior notice and printing errors possible.

FOREWORD INFORMATION

1. FOREWORD INFORMATION

1.1. Network recorder's technical data

| NVR-3304 | |
|---------------------------------|---|
| VIDEO / AUDIO | |
| Network Camera | Up to 4 channel in resolution 1920x1080(video + audio) |
| Camera/Protocol suport | NOVUS, ONVIF, RTSP |
| Monitor Output | Main (split screen, full screen, sequence): 1 x HDMI, 1 x VGA, 1 x BNC |
| Audio Input/Output | 1 x Line in (RCA) /1 x Line out (RCA) |
| Dualstreaming support | Yes* |
| RECORDING | |
| Compression | H.264 |
| Resolution | 1920 x 1080 and lower |
| Speed | Up to 120 fps (4 x 30fps for 1920 x 1080, 1280 x 720) |
| Streams Size | Up to 32Mb/s for the system |
| Recording Mode | Individual settings for: each day/hour (6 hourly ranges) for each camera, possibility of combining individual recording modes |
| Schedule | Individual settings for: each day, each hour, each camera, possibility of combining individual recording modes |
| Prealarm/postalarm | 0 s - 30 s/- |
| DISPLAY | |
| Resolution | Up to 1920 x 1080 |
| Speed | Up to 120 fps (4 x 30fps)***** |
| PLAYBACK | |
| Speed | Up to 120 fps (4 x 30fps for 1280 x 720) Up to 60 fps (2 x 30 fps for 1920 x 1080) |
| Recorded Data Search | By date/time |
| BACKUP | |
| Methods | USB port (HDD or Flash memory), network |
| File Format | AVI,DAV |
| STORAGE | |
| Internal HDD | Installing 1 HDD 3,5" SATA |
| Total Capacity | 4 TB |
| ALARM | |
| Internal Input/Output | - / - |
| Camera Input/Output | Support camera's alarm input* |
| Motion Detection | Support camera's motion detection* |
| System Reaction to Alarm Events | Buzzer, E-mail , output activation, screen message, recording activation, PTZ function |
| NETWORK | |
| Network Interface | 1 x Ethernet - RJ-45 socket, 10/100 Mbit/s |
| Network Protocols Support | ONVIF (2.2/Profile S), DHCP, PPPoE, DDNS,SMTP,SNTP,FTP,UPnP,TCP/IP IPv4, UDP, HTTP, RTP/RTSP |
| PC Software | Internet Explorer |
| Smartphone Software | IMSeYE (for iPhone, Android,) |
| Number of Connections/Bandwidth | Up to 10 connections |
| PTZ | |
| Functions | Pan, tilt, zoom, preset * |
| AUXILIARY INTERFACES | |
| USB | 2 x USB 2.0 |
| OPERATING SYSTEM | |
| Operating mode | Triplet |
| OSD | Polish, English and others |
| Control | PC mouse (in-set included), network |
| System Diagnostic | Automatic control of HDDs, network, network cameras lost |
| Security | Password protection, IP filtering |
| INSTALLATION PARAMETERS | |
| Dimensions (mm) | 215 (W) x 215 (D) x 46 (H) |
| Weight | 0,8 kg (without HDD) |
| Power Supply | 12 VDC (100~240VAC/12VDC PSU In-set included) |
| Power Consumption | 30 W (with 1 HDD) |
| Operating Temperature | -10 °C ~ 55°C |

** Function capability depends of camera used , for details please check compatibility list. ** - For BNC output speed may be lower ***- Available with using dual streaming mode

FOREWORD INFORMATION

| | NVR-3308 | NVR-3326 |
|---------------------------------|---|---|
| VIDEO / AUDIO | | |
| Network Camera | Up to 8 channel in resolution 1920x1080 (video + audio) | Up to 26 channel in resolution 1280 x 720 (video + audio) |
| Camera/Protocol suport | NOVUS, ONVIF, RTSP | NOVUS, ONVIF, RTSP |
| Monitor Output | Main (split screen, full screen, sequence): 1 x HDMI, 1 x VGA, 1 x BNC | Main (split screen, full screen, sequence): 1 x HDMI, 1 x VGA, 1 x BNC |
| Audio Input/Output | 1 x Line in (BNC) / 1 x Line out (BNC) | 1 x Line in (BNC) / 1 x Line out (BNC) |
| Dualstreaming support | Yes* | Yes* |
| RECORDING | | |
| Compression | H.264 | H.264 |
| Resolution | 1920 x 1080 and lower | 1920 x 1080 and lower |
| Speed | Up to 240 fps (8 x 30fps for 1280 x 720) Up to 240 fps (8 x 30fps for 1920 x 1080) | Up to 780 fps (26 x 30fps for 1280 x 720) Up to 480 fps (16 x 30fps for 1920 x 1080) |
| Streams Size | Up to 64Mb/s for the system | Up to 128Mb/s for the system |
| Recording Mode | Time-lapse, Event (Alarm, Motion detection), manual | Time-lapse, Event (Alarm, Motion detection), manual |
| Schedule | Individual settings for: each day/hour (6 hourly ranges) for each camera, possibility of combining individual recording modes | Individual settings for: each day/hour (6 hourly ranges) for each camera, possibility of combining individual recording modes |
| Prealarm/postalarm | 0 s - 30 s / - s | 0 s - 30 s / - |
| DISPLAY | | |
| Resolution | Up to 1920 x 1080 | Up to 1920 x 1080 |
| Speed | Up to 240 fps (8 x 30fps) ***** | Up to 780 fps (26 x 30fps) ***** |
| PLAYBACK | | |
| Speed | Up to 120 fps (4 x 30fps for 1280 x 720) Up to 60 fps (2 x 30fps for 1920 x 1080) | Up to 390 fps (13 x 30fps for 1280 x 720) Up to 180 fps (6 x 30fps for 1920 x 1080) |
| Recorded Data Search | By date/time | By date/time |
| BACKUP | | |
| Methods | USB port (HDD or Flash memory), network | USB port (HDD or Flash memory), network |
| File Format | AVI,DAV | AVI,DAV |
| STORAGE | | |
| Internal HDD | Installing 2 HDD 3,5" SATA | Installing up to 2 HDD 3,5" SATA |
| Total Capacity | 8 TB | 8 TB |
| ALARM | | |
| Internal Input/Output | 4 / 1 relay | 16 / 3 relay |
| Camera Input/Output | Support camera's alarm input* | Support camera's alarm input* |
| Motion Detection | Support camera's motion detection* | Support camera's motion detection* |
| System Reaction to Alarm Events | Buzzer, E-mail, output activation, screen message, recording activation, PTZ function | Buzzer, E-mail, output activation, screen message, recording activation, PTZ function |
| NETWORK | | |
| Network Interface | 1 x Ethernet - RJ-45 socket, 10/100 Mbit/s + 4 x Ethernet - RJ-45 socket, 10/100/ Mbit with IEEE 802.3 af PoE/ | 1 x Ethernet - RJ-45 socket, 10/100/1000 Mbit/ |
| Network Protocols Support | ONVIF (2.2/Profile S), DHCP, PPPOE, DDNS,SMTP,SNTP, FTP,UPnP,TCP/IP IPv4, UDP, HTTP, RTP/RTSP | ONVIF (2.2/Profile S), DHCP, PPPOE, DDNS,SMTP,SNTP, FTP,UPnP,TCP/IP IPv4, UDP, HTTP, RTP/RTSP |
| PC Software | Internet Explorer | Internet Explorer |
| Smartphone Software | IMSeYE (for iPhone, Android) | IMSeYE (for iPhone, Android) |
| Number of Connections/Bandwidth | Up to 10 connections | Up to 10 connections |
| PTZ | | |
| Functions | Pan, tilt, zoom, preset * | Pan, tilt, zoom, preset * |
| AUXILIARY INTERFACES | | |
| USB | 2 x USB 2.0 | 2 x USB 2.0 |
| OPERATING SYSTEM | | |
| Operating mode | Triplex | Triplex |
| OSD | Polish, English and others | Polish, English and others |
| Control | PC mouse, IR remote control (in-set included), network | PC mouse, IR remote control (in-set included), network |
| System Diagnostic | Automatic control of HDDs, network, network cameras lost | Automatic control of HDDs, network, network cameras lost |
| Security | Password protection, IP filtering | Password protection, IP filtering |
| INSTALLATION PARAMETERS | | |
| Dimensions (mm) | 360 (W) x 48 (H) x 260 (L) | 360 (W) x 48 (H) x 260 (L) |
| Weight | 2 kg (without HDD) | 2 kg (without HDDs) |
| Power Supply | 12 VDC (100~240VAC/12VDC PSU) + 48 VDC (100~240VAC PUS) In-set included | 12 VDC (100~240VAC/12VDC PSU In-set included) |
| Power Consumption | 40 W (with 2 HDDs) + 60 W PoE power supply | 40 W (with 2 HDDs) |
| Operating Temperature | -10 °C ~ 55°C | -10 °C ~ 55°C |

** Function capability depends of camera used , for details please check compatibility list. ** - For BNC output speed may be lower ***- Available with using dual streaming mode

FOREWORD INFORMATION

1.2. Main characteristics

- Support ONVIF and RTSP protocol
- Monitor output: HDMI, VGA, BNC
- Support 2 HDDs 3,5" inside (NVR-3304 1 HDD)

NVR-3304

- 4 video and audio channels for network cameras
- Recording speed up to 120 fps in 1920 x 1080 resolution
- Supported resolution up to 1920x1080

NVR-3308

- 8 video and audio channels for network cameras
- Recording speed up to 240 fps in 1920 x 1080 resolution
- Supported resolution up to 1920x1080

NVR-3326

- 26 video and audio channels for network cameras
- Recording speed up to 780 fps in 1280 x 720 resolution
- Supported resolution up to 1920x1080

1.3. Package contents

Unpack the device carefully. After unpacking, please ensure that package contains the following items:

- Network Video Recorder: NVR-3304 / NVR-3308 / NVR-3326
- IR remote control (only in : NVR-3308,NVR-3326)
- 12 VDC Power supply (48VDC PoE power supply for NVR-3308)
- SATA cables for HDDs (NVR-3304 1 cable for HDD)
- USB Mouse
- Accessory bag
- User's manual (short)
- CD with a full version of user's manual and software tools

If any of the elements has been damaged during transport, pack all the elements back into the original packaging and contact your supplier.

CAUTION:

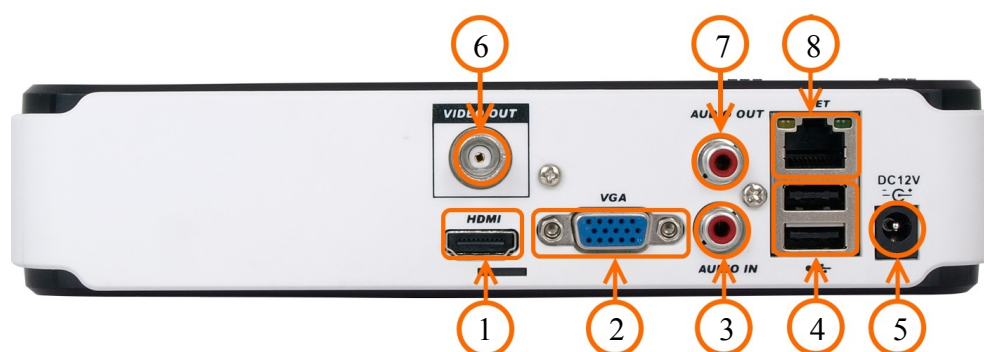
If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

STARTING THE DEVICE

2. STARTING THE DEVICE

2.1 Electrical connection and other rear panel elements.

NVR-3304 back panel

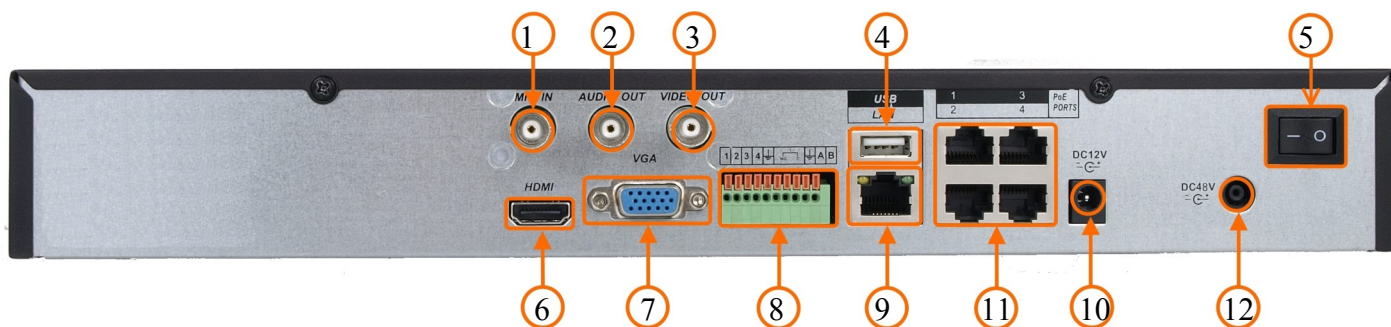


- | | |
|----------------------|---|
| 1. HDMI: | Main monitor connectors, use HDMI cable to connect monitor. |
| 2. VGA: | Main monitor connectors, use D-SUB VGA cable to connect monitor. |
| 3. AUDIO IN: | Audio mono inputs for connecting microphone*. |
| 4. USB: | 2 x USB 2.0 ports for external Flash memory, mouse connection and other USB compatible devices. |
| 5. DC 12V: | 12 VDC Power supply socket. |
| 6. VIDEO OUT: | BNC video output. |
| 7. AUDIO OUT: | Port for connecting local speaker with pre-amplifier. |
| 8. NET: | RJ-45 connector port for connecting to the LAN network . |

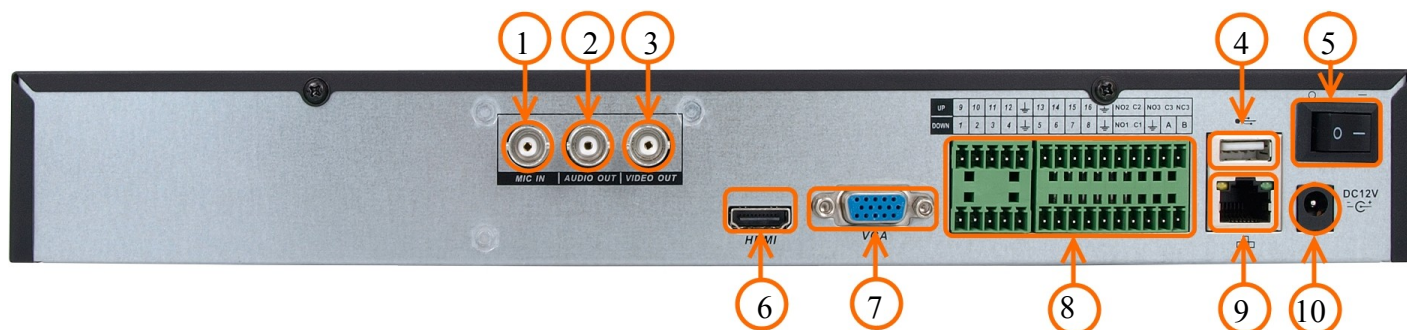
* audio input will be available in the future.

STARTING THE DEVICE

NVR-3308 back panel



NVR-3326 back panel



- | | |
|-------------------|--|
| 1. MIC IN: | Audio mono inputs for connecting microphone*. |
| 2. AUDIO OUT: | Port for connecting local speaker with pre-amplifier. |
| 3. VIDEO OUT: | BNC video output. |
| 4. USB: | USB 2.0 port for external Flash memory, mouse connection and other USB compatible devices. |
| 5. POWER SW: | NVR power switch, plug the power cord and turn this switch on. |
| 6. HDMI: | Main monitor connectors, use HDMI cable to connect monitor. |
| 7. VGA: | Main monitor connectors, use D-SUB VGA cable to connect monitor |
| 8. ALARM & RS485: | Alarm input and output interface*. |
| 9. NET: | RJ-45 connector port for connecting to the LAN network . |
| 10. 12 VDC POWER | 12 VDC power supply socket |
| 11. PoE : | 4 x RJ-45 connections ports with PoE support |
| 12. PoE POWER: | 48 VDC PoE power supply socket |

* RS485 and audio input will be available in the future.

STARTING THE DEVICE

2.2 HDD mounting

Novus NVR-3308 and NVR-3326 supports 2 internal SATA HDDs (NVR-3304 1 HDD).

WARNING!

Prior to removing cover of the DVR please unplug the power cord first

In order to find information regarding the compatible models of HDDs and their maximum capacities, please contact Novus distributor or check the information presented at www.novuscctv.com. AAT HOLDING Company is not responsible for any problems resulting from using not recommended hard drives.

The list of compatible HDDs contains all the HDDs that can be used with a given DVR including HDDs designed for office use - so called desktop disks. However, due to the fact that reliability of the recording process and data safety are paramount factors of any CCTV system, we strongly advise to use HDDs designed for continuous (24/7) operation.

You need to format disks to if they were used in a different device. All data saved on HDD prior to format will be lost.

2.2.1 NVR-3304 HDD mounting



In order to mount HDD, please unscrew two screws on the NVR bottom depicted below and remove cover.

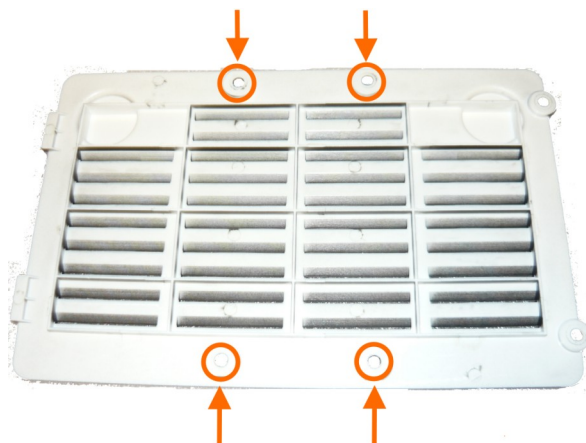
STARTING THE DEVICE

Set the HDD on the cover with connection ports directed into cover holes used to fasten it into the housing.



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Use 4 screws supplied with NVR to attach HDD to the cover.



Put cover with HDD into the housing. Connect data and power connector and close the cover. Secure the cover with two screws previously unscrewed from the housing.



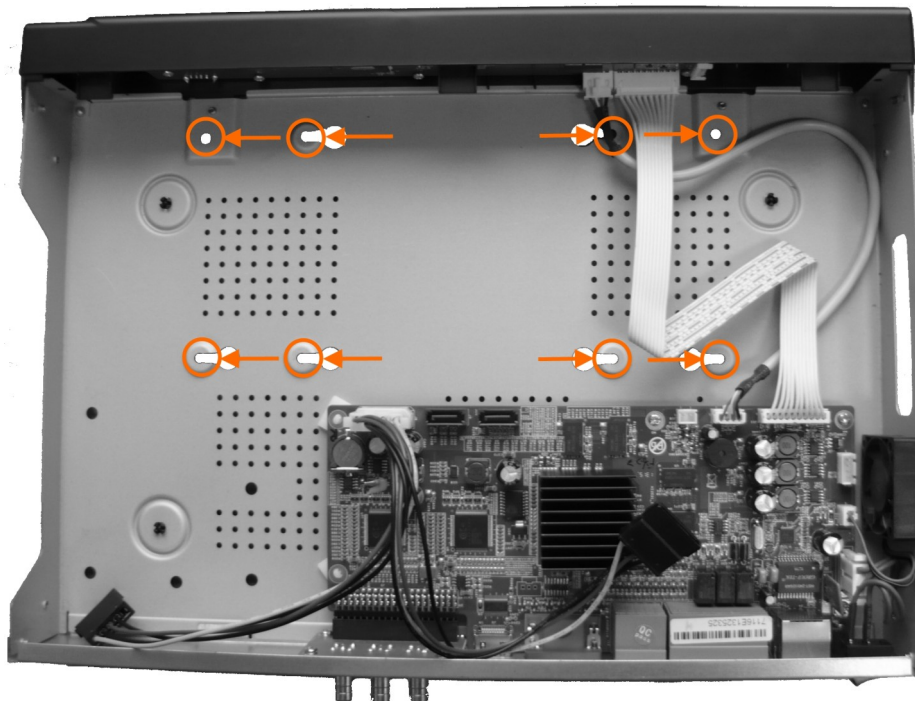
STARTING THE DEVICE

2.2.2 NVR-3308 and NVR-3326 HDD mounting

For installing HDDs unscrew 6 screws according to picture below and remove the cover.

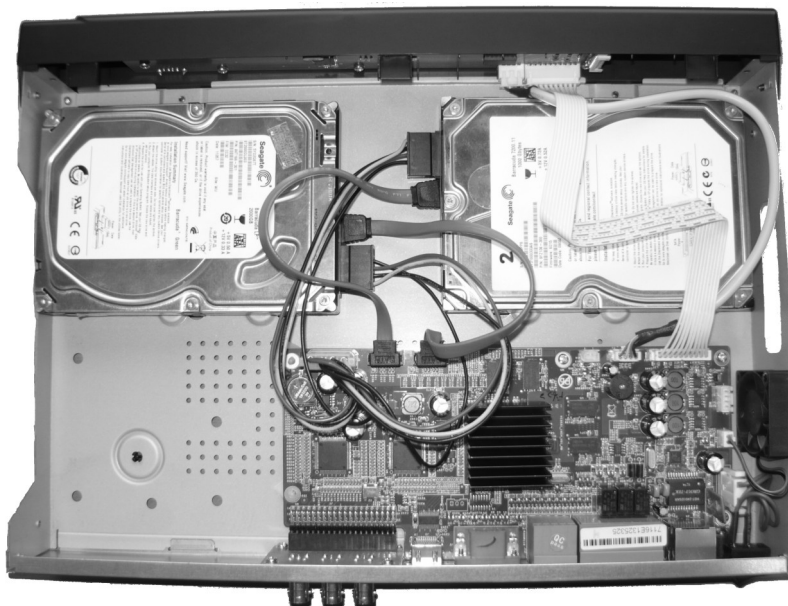


The figure below indicates placeholders mounting hard drives. Screw the drives in selected places.



STARTING THE DEVICE

Then connect the power supply and use the supplied cables to connect the SATA drives to the NVR motherboard .



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Replace the cover and secure it with 6 screws.

2.3. Connecting power adapter.

NVR-3304



Connect the cable end from power supply supplied with the NVR-em into the power socket marked DC 12V in NVR. Plug power supply into mains, device should start after connecting to power source. Wait about 2 minutes to start working with NVR.

STARTING THE DEVICE

NVR-3308



Connect the cable end from the 12 V DC power supply supplied with NVR into socket labelled DC 12V in NVR. In order to supply electricity into PoE ports, cable end from the 48 VDC power supply must be connected to the socket marked DC48 in NVR. Connect power supply to the mains and set power switch to “-” position to start the device. Wait about two minutes till initialization process ends and start working with NVR . If you turn off NVR using SHUTDOWN button use ON/OFF button form front panel to turn on the device.

NVR-3326



Connect the 12V DC power supply cable end to power socket labelled DC 12V in NVR. Connect power supply to the mains and set power switch to “-” position to start the device. Wait about two minutes till initialization process ends and start working with NVR. If you turn off NVR using SHUTDOWN button use ON/OFF button form front panel to turn on the device.

CAUTION:

Make connection when the power is not applied.

Make sure that power adapter is placed near of NVR and secured from accidental disconnection.

If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

Before starting the device familiarize yourself with the description and the role of particular inputs, outputs and adjusting elements that the device is equipped with.

STARTING THE DEVICE

2.4. Connecting monitor

This product supports following interfaces for main monitor: HDMI, VGA and BNC.

For HDMI and VGA outputs following resolutions are supported: 1024x768, 1280x1024, 1280x720, 1920x1080.

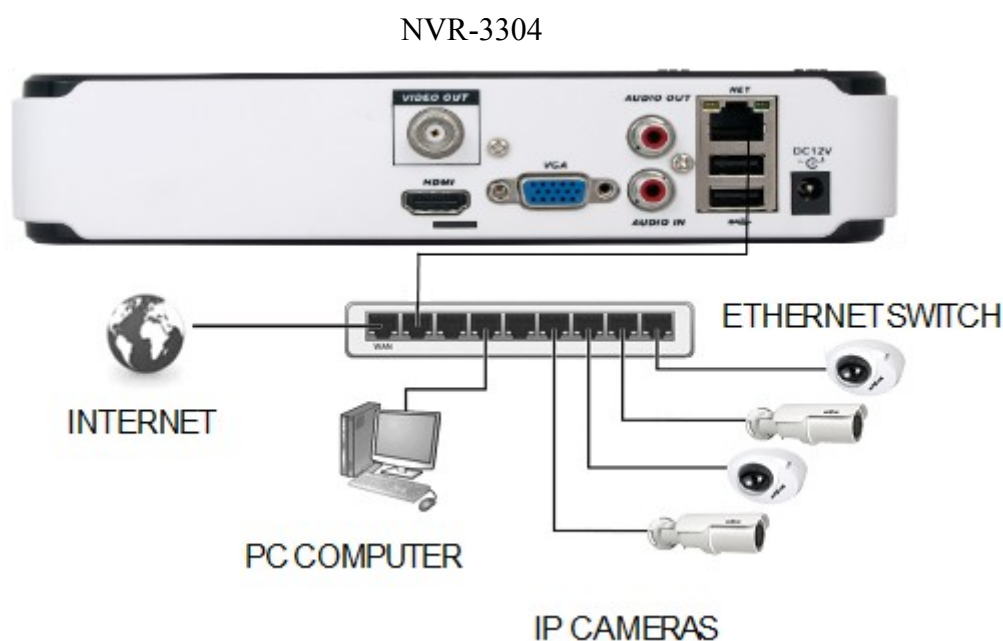
After changing resolution you have to confirm it by clicking OK. NVR will be restarted in order to change the resolution.

You can use the HDMI <> DVI converter to connect to the DVI monitor. HDMI<>DVI converter it's not included and you have to buy it separately.

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2.5. Camera and Network wiring

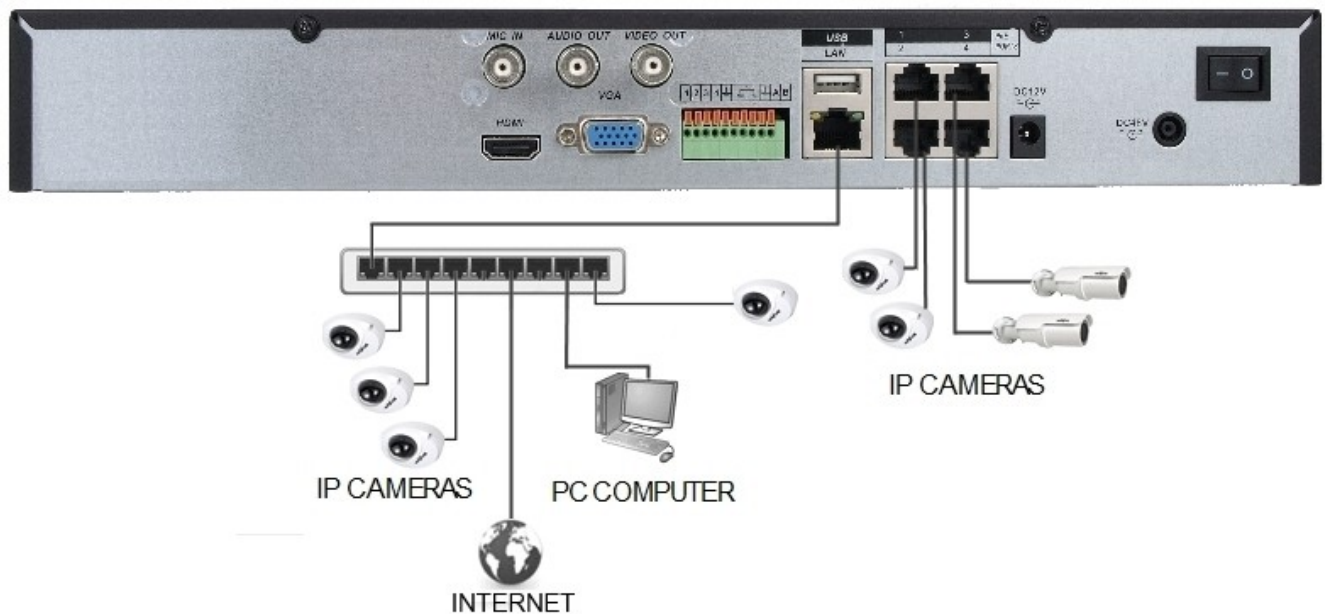
To connect compatible IP cameras to the NVR you have to use additional network switch. By using Ethernet cables connect the cameras and NVR to the switch, like on image below. Please notice that the Ethernet connection is effective within 100 meter distance.



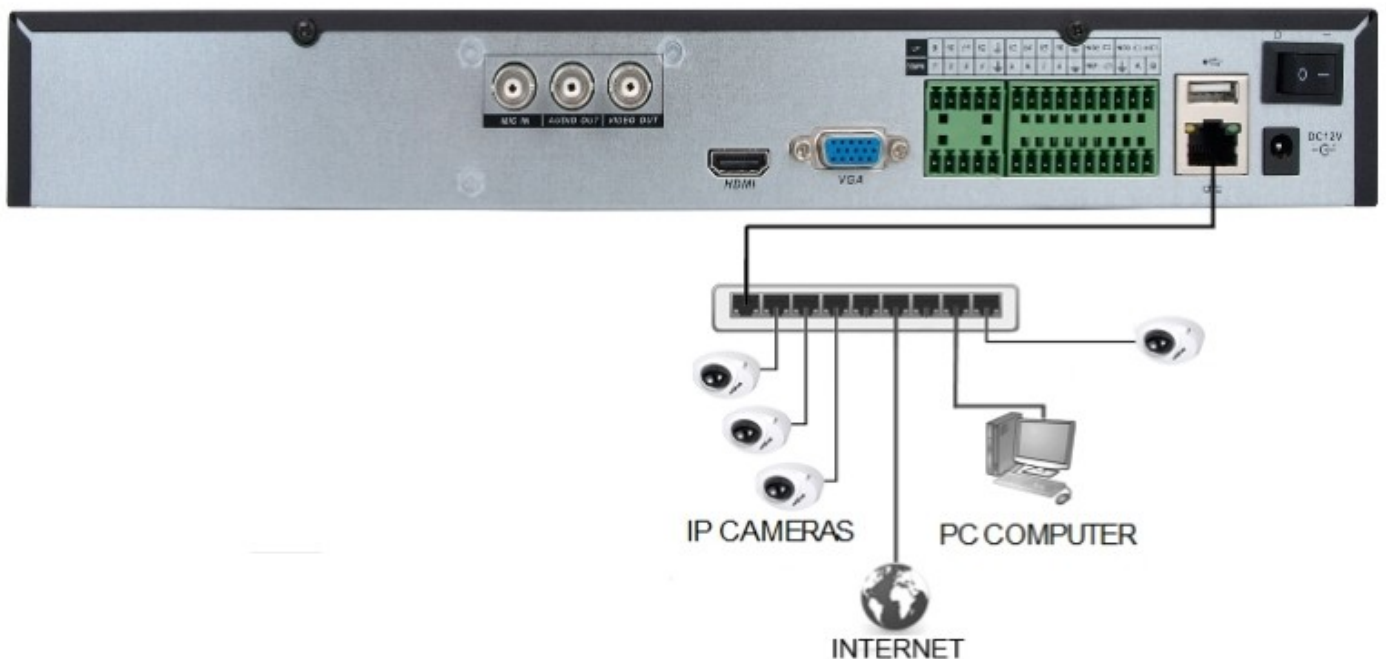
STARTING THE DEVICE

NVR-3308 has 4 bulid-in RJ-45 ethernet ports with PoE support which can be used for connecting cameras. Please notice that the Ethernet connection is effective within 100 meter distance.

NVR-3308



NVR-3326



STARTING THE DEVICE

Note:

To ensure recording stability from an overloaded network traffic, or unauthorised access, it is strongly recommended to create separate network secured by router firewall from the user network.

Before adding any camera to the NVR, you have to configure its network settings using computer like it is described in Camera User Manual. For the next steps of camera and network configurations please check chapter 3.4. Startup configuration.

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2.6. Peripheral device connection

- Connecting audio ports

Audio output signal normally are above 200mV 1kΩ. You can connect the low impedance earphone, or power amplifier with the external speakers.

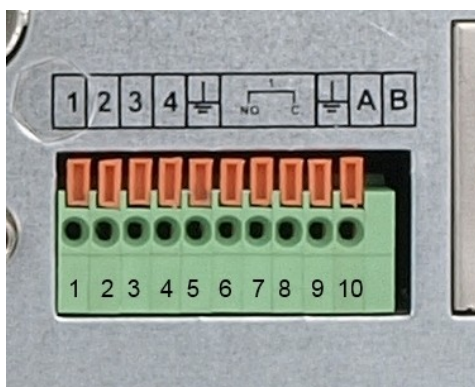
- Connecting USB devices

NVR has 2 x USB 2.0 ports for external Flash memory, mouse connection and other USB compatible devices.

- Connecting alarms ports

NVR-3308 and NVR-3326 have local alarm input and output. For connecting them please refer table below.

NVR-3308 have 4 alarm inputs and 1 alarm output.



| ALARM INPUTS | | | | | ALAM OUTPUT | | | RS 485 | |
|--------------|---------|---------|---------|-----|-------------|---|-----|--------|----|
| A. IN 1 | A. IN 2 | A. IN 3 | A. IN 4 | GND | NO | C | GND | + | - |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

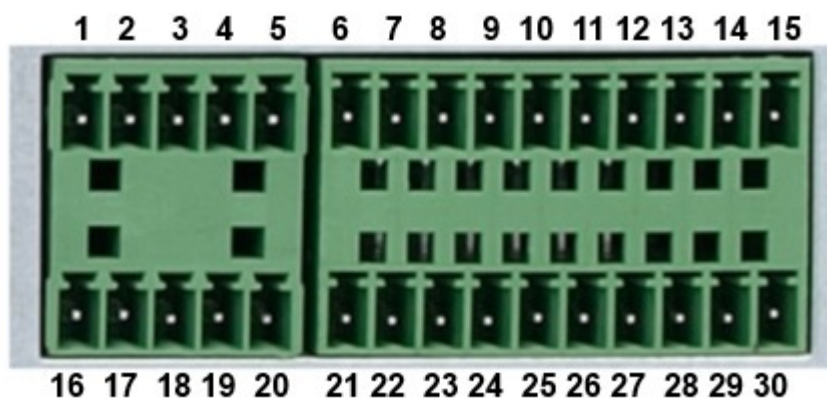
To activate alarm in you have to simply connect alarm input (1,2,etc) to GND cable.

Alarm output it's a relay with 2 connectors NO and C.

Note: RS485 will be available in the future.

STARTING THE DEVICE

NVR-3326 series has 16 local alarm inputs and 3 alarm outputs.



For connecting them please refer table below:

| ALARM INPUTS | | | | | ALARM INPUTS | | | | | ALARM OUTPUTS | | | | |
|--------------|----------|----------|----------|-----|--------------|----------|----------|----------|-------|---------------|----|-----|--------|-----|
| A. IN 9 | A. IN 10 | A. IN 11 | A. IN 12 | GND | A. IN 13 | A. IN 14 | A. IN 15 | A. IN 16 | GND - | NO2 | C2 | NO3 | C3 | NC3 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| A. IN 1 | A. IN 2 | A. IN 3 | A. IN 4 | GND | A. IN 5 | A. IN 6 | A. IN 7 | A. IN 8 | GND | NO1 | C1 | GND | + | - |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| ALARM INPUTS | | | | | ALARM INPUTS | | | | | ALARM OUTPUTS | | | RS 485 | |

To activate alarm in you have to simply connect alarm input (1,2,etc) to GND cable.

Alarm output it's a relay with 2 connectors NO and C.

Note:

RS485 will be available in the future.

NVR OPERATING

3. NVR OPERATING

3.1. Front panel description

NVR-3304



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1. POWER LED:

Power supply indicator

2. HDD LED:

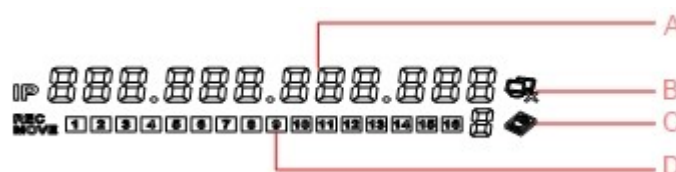
HDD operation indicator

NVR OPERATING

NVR-3308 and NVR-3326



1. LCD :



A. IP address of the device, the clock, the external alarm channel, error status code of the machine, remote address, internal temperature of the chassis is displayed.

B. Network Connection status.

C. HDD status and numbers. "E" and flash label refer HDD error.

D. Cycling display the recording status and motion detection (distinguish by "REC" and "MOVE").

2. IR Receiver : Receive the remote control signal.

3. ESC : Back to previous menu, operation cancel;
Back to live view when playing back records.

4. Direction : Up/Down: Move up or down. Change the settings and increase or decrease the digital. Left/Right: Control the playback control bar of the records.

5. Enter : Confirm the operations.
Jump to the default button.
Enter the menu.

6. Fn : The button displays PTZ control and image color when in a single-screen monitoring.
Simultaneously press the Fn key and the direction key to complete the settings with the dynamic monitoring area.
Press the Fn key to empty all contents of the edit box.
Press the key to switch between the digital case in English, Chinese input.
Special with the function of each menu page prompts.

7. USB : To connect the mouse or Flash drives.

8. ON/OFF : Power on/off

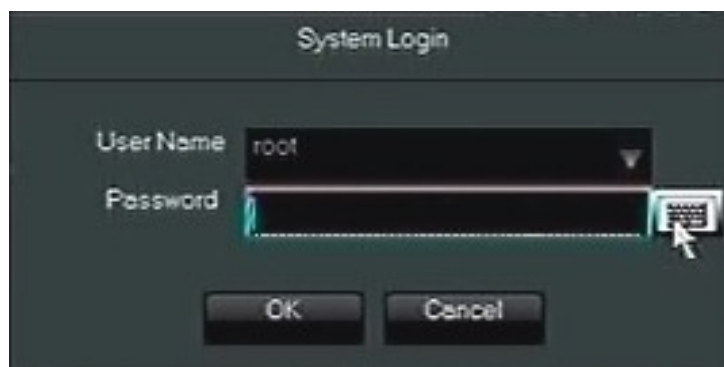
3.2. Controlling via USB mouse

It is possible to control NVR via an USB mouse connected to the USB port. Double-clicking on any camera in 2x2, 3x3 display mode switches the display to full-screen mode. Subsequent double-click returns to previous display mode. Click the right key of mouse to bring up menu with basic functions. Select MAIN MENU from that menu to have access other functions. To exit the menu press right mouse button or press ESC button in NVR-3308 and NVR-3326 front panel.

NVR OPERATING

3.3. System operations

To manipulate or access menus of the NVR, you should log in first. Press the right mouse button and select one of the items on the menu such as the MAIN MENU to induce the login window. You can also press ENTER button on front panel of NVR-3308 and NVR-3326 to display login window.







Form drop down menu select user name and enter password. Entering the characters is possible using the virtual keyboard. Double click on the password entry field to call it. To call it the front panel press the Fn button.



Default username /password is “root”/”pass”

For safety reasons, it is recommended to change default user name and password.

If the language of the recorder was reset see chapter 4.5 describing the procedure for changing the language.

In order to shutdown NVR you should click on SHUTDOWN icon from the  main menu and click the SHUTDOWN  button.

In order to reboot NVR you should click on SHUTDOWN icon  from the main menu and then click on RESTART SYSTEM icon .

To prevent unauthorized access, it is recommended to log out when you finish operating with menu. To do that click on SHUTDOWN icon  from the main menu and then select MENU LOGOUT icon .

NOTE: By default NVR will log off user after 10 minutes of inactivity. Select SYSTEM icon form MAIN MENU and then click on on BASICAL icon to modify AUTO LOGOUT time. (0 means no logging off)

CAUTION:

If you turn off the system in an abnormal manner such as removing the power cord while the system is working, the disk will acquire or increase the numbers of bad sectors, causing data loss and shortened life cycle of the disk.

NVR OPERATING

3.4. Startup configuration

Prior to using NVR for the first time, initial setup is strongly advised. Before you connect the IP cameras to the NVR, please set up network and stream parameters of IP cameras using computer.

Note:

For suggested values for IP camera setting please refer to the "Cameras Compatibility Table" available as separate file in CD added to NVR. If you will set wrong values some problems may appear: the NVR cannot search the IP camera, the stream cannot be connected, the image is not fluent, the image quality is bad and so on.



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Set basic NVR configuration :

From the MAIN MENU click SYSTEM icon  and then click on BASIC icon  to set following parameters :

- SYSTEM TIME - set up correct time and date
- DST—to set daylight saving functions
- DATE FORMAT - Modify the date display format
- DATE SEPARATOR - set the separator for date
- TIME FORMAT - 12-hr or 24-hr display mode
- TIME ZONE - set time zone
- LANGUAGE - allow to select preferred language
- VIDEO FORMAT- PAL or NTSC (required for using BNC video output)
- DVR No.— set No. NVR to be distinguishable from among several NVR with remote control
- AUTO LOGOUT - set standby time after user will be logout. (0—means no logout)
- CHANNEL MODE - to select channel decoding configuration

Configure HDD

From the MAIN MENU select SYSTEM icon  and click on STORAGE icon . Select check the hard drive and press SET button to set HDD as read/write, read-only or redundancy mode. If it is unformatted you have to select HDD and press FORMAT button to format HDD.

CAUTION: Hard disk format operation result in the loss of video data

SET BASIC NETWORKING

IV. From the MAIN MENU click NETWORK icon  and go to the NETWORK section. Select BASE tab and set following parameters:

- IP ADDRESS (by default it is 192.168.1.100)
- SUBNET MASK (by default it is 255.255.255.0).

NVR OPERATING

Note:

Be sure that IP addresses and subnet mask of the NVR and the IP cameras are in the same network subnet (e.g. for the NVR IP address 192.168.1.100, and mask 255.255.255.0 appropriate address for the camera ranges from 192.168.1.1 to 192.168.1.254, for example 192.168.1.201). It is not allowed to set the same addresses for multiple devices

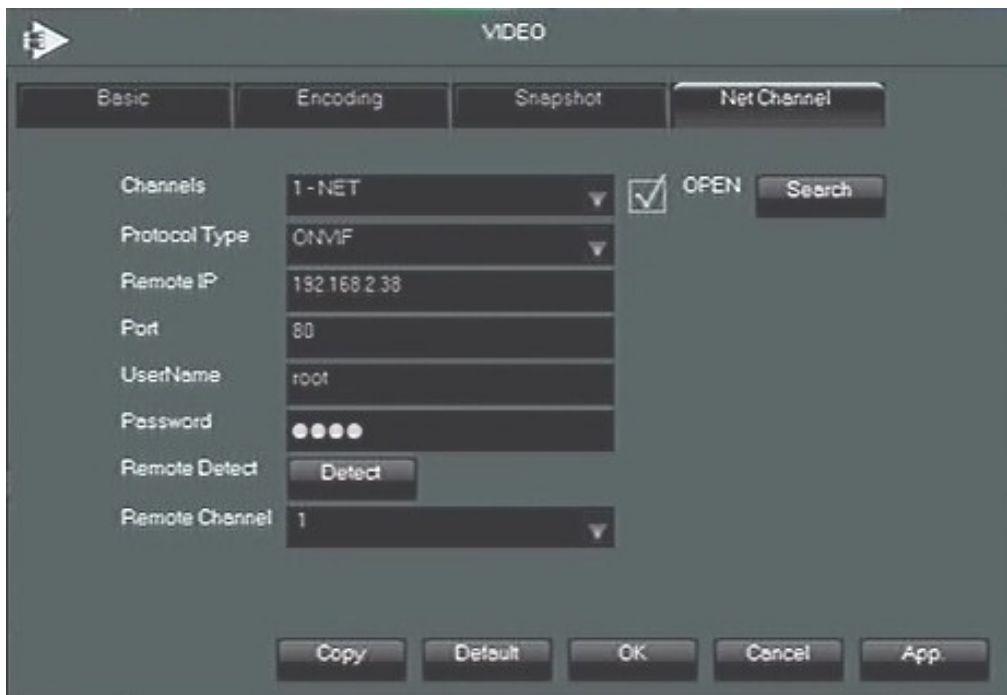
Optionally if you are going to connect NVR to the Internet (for remote access, sending email, etc) set up :

- GATEWAY,
- FIRST and ALTERNATE DNS.

You can alternatively check DHCP mode (DHCP server is required in this method in target network) then all settings will be set up automatically. When you use DHCP server check IP address lease and its linking with NVR MAC address to avoid changing or losing IP address during device operation or network/DHCP server breakdown. This solution is not recommended for security systems.

Connecting cameras

To configure cameras to work with NVR click on VIDEO button from MAIN MENU  and go to NET CHANNEL tab.



The screenshot shows the 'VIDEO' configuration window with the 'Net Channel' tab selected. The fields are as follows:

| Field | Value |
|----------------|--------------|
| Channels | 1-NET |
| Protocol Type | ONVIF |
| Remote IP | 192.168.2.38 |
| Port | 80 |
| UserName | root |
| Password | •••• |
| Remote Detect | Detected |
| Remote Channel | 1 |

Buttons visible: OPEN (checked), Search, Copy, Default, OK, Cancel, App.

You can input data for connecting camera manually or search network for cameras available.

Set following fields to connect with camera.

- CHANNELS - select desired channel number
- PROTOCOL TYPE -set protocol supported by camera (default ONVIF)
- REMOTE IP - IP address of the camera

NVR OPERATING

- **PORT** - Enter the port used to transfer data from the camera.
- **USERNAME** - Enter the user name used to connect to the camera.
- **PASSWORD** - Enter the user name used to connect to the authorization of the camera.
- **REMOTE DETECT** - After completing of the above settings, click the DETECT button. NVR will connect with the camera and return the connection status.
- **REMOTE CHANNEL** - When connecting to the camera set this number to 1.

Check the OPEN checkbox to make turn the channel on.

To search for available cameras click on SEARCH button.



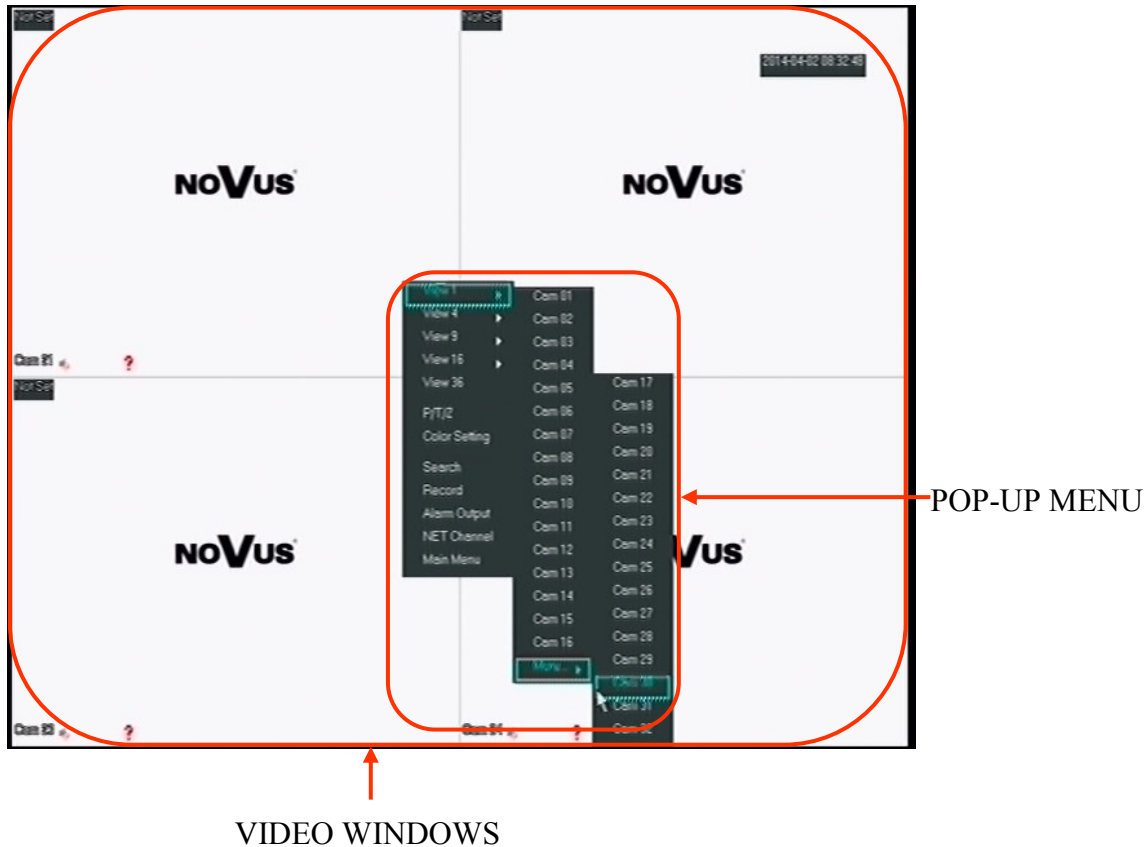
Make sure that protocol type is set to ONVIF and press SEARCH button. Wait for a while until the NVR find available cameras. Double-click on the selected camera to transfer settings to the NET CHANNEL tab. You can then input valid password and username and click DETECT to check if NVR is able to connect with camera.

Make sure to check the OPEN check box to activate channel and press APP. button to enable camera . To copy camera settings to other channels click COPY button and select the channels which do you want to copy settings. Please note that IP address is also copied, so you have to change it manually in copied channels.

To save settings and exit menu press OK button.

4. NVR MENU

4.1. Live monitoring



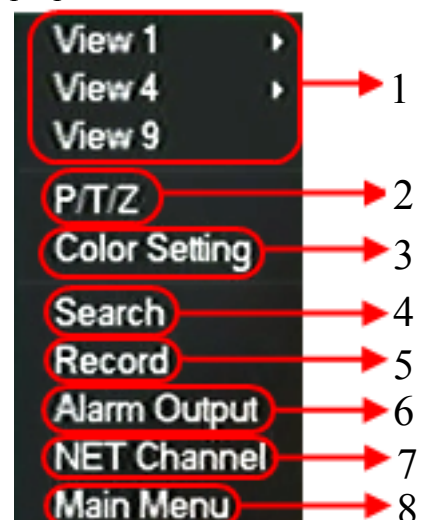
As soon as the NVR completes its initialization process, it will enter the real-time monitoring image.

Displaying all cameras simultaneously is the default mode. Press NVR up or down button on the front panel or remote controller to change display mode (NVR-3308 and NVR-3326).

You can also use mouse to change camera view. Select desired channel on split screen and press left mouse button to display it in a single view.

By pressing right mouse button on the view screen you can invoke pop-up menu with basic functions.









1. Select display view. Single channel or split screens
2. Enables PTZ control for selected channel
3. Adjust image color hue, saturation, gain, white-level parameters
4. Search records by selected time, channel, record type
5. Manage basic recording settings
6. Manage basic alarm output settings
7. Monitor connection and display stream information
8. Opens NVR Main Menu



NVR MENU









4.2 . RECORDER MENU

After selecting the MAIN MENU from OSD the MAIN MENU window appears providing access to the main functions of the recorder.

| Name | Icon | Description |
|----------|---|---|
| SEARCH |  | Search for and playback recorded video files by date/time, alarms or motion. |
| VIDEO |  | Configure channel name, encode, snap and net channel. |
| RECORD |  | Record related and record plan configure. |
| NETWORK |  | Setup network parameters: IP address, subnet mask, default gateway, TCP/IP ports. |
| PTZ |  | Configure PTZ cameras: protocol, communication parameters, and communication address. (Function not available) |
| ALARM |  | Display exterior alarm, motion detecton, video loss alarm state. |
| SYSTEM |  | Configure System Time,Display,Abnormity,Harddisk status; recording bitrate; system access logs; current online users. |
| SHUTDOWN |  | Logout the OSD menu or restart the system. After idle for standby time(no input),the system will exit OSD. |

NVR MENU

Choosing the SYSTEM icon opens menu window with recorders system settings

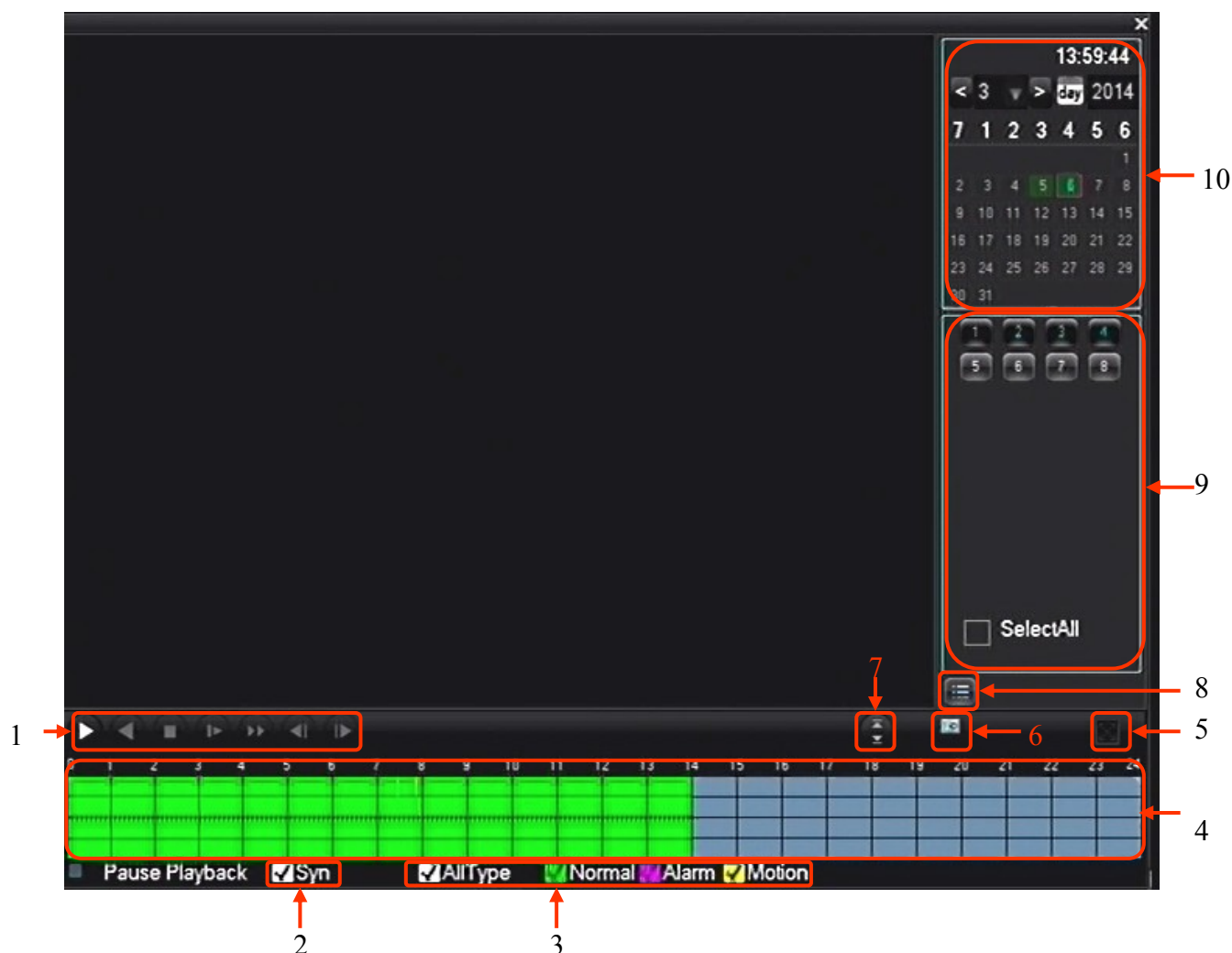
| Name | Icon | Description |
|-----------|---|--|
| BASICAL |  | Configure time and display format; language; configure DVR remote control address. |
| DISPLAY |  | Settings for GUI and monitoring parameters. |
| STORAGE |  | HDD management and record backup management. |
| ABNORMITY |  | Abnormal parameter setup including HDD error, network error and IP conflict. |
| STATUS |  | Display recording bitrate; User (local and online) administration. |
| MAINTAIN |  | Display system log; version; configure default and automatic maintenance. |
| ACCOUNT |  | Account management |
| RS232 |  | Settings for serial port function and baud rate. (Function not available) |

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NVR MENU

4.3. Searching and playing recorded video

To start searching the recordings select press right menu button on view screen and select SEARCH from pop-up menu. You can also select SEARCH  icon from MAIN MENU. Then following window appears:



1. Playback control - Play/Pause, Play backward, Stop, Slow Playback, Fast Playback, Next Frame.
2. Record synchronization - Synchronization of playing time for all channels
3. Record type selection - All type, Normal (green), Alarm (Pink), Motion (Yellow)
4. Time graph - Let you view and select records
5. Full Screen mode - Allow to view the recording in full screen mode
6. Circle playback - Play the recordings in the loop
7. Next/Prev. Channel - let you change channel in active window
8. Show file list - Displays a list of files with recordings
9. Channel selector - selects cameras for playback
10. Calendar - select day of recordings

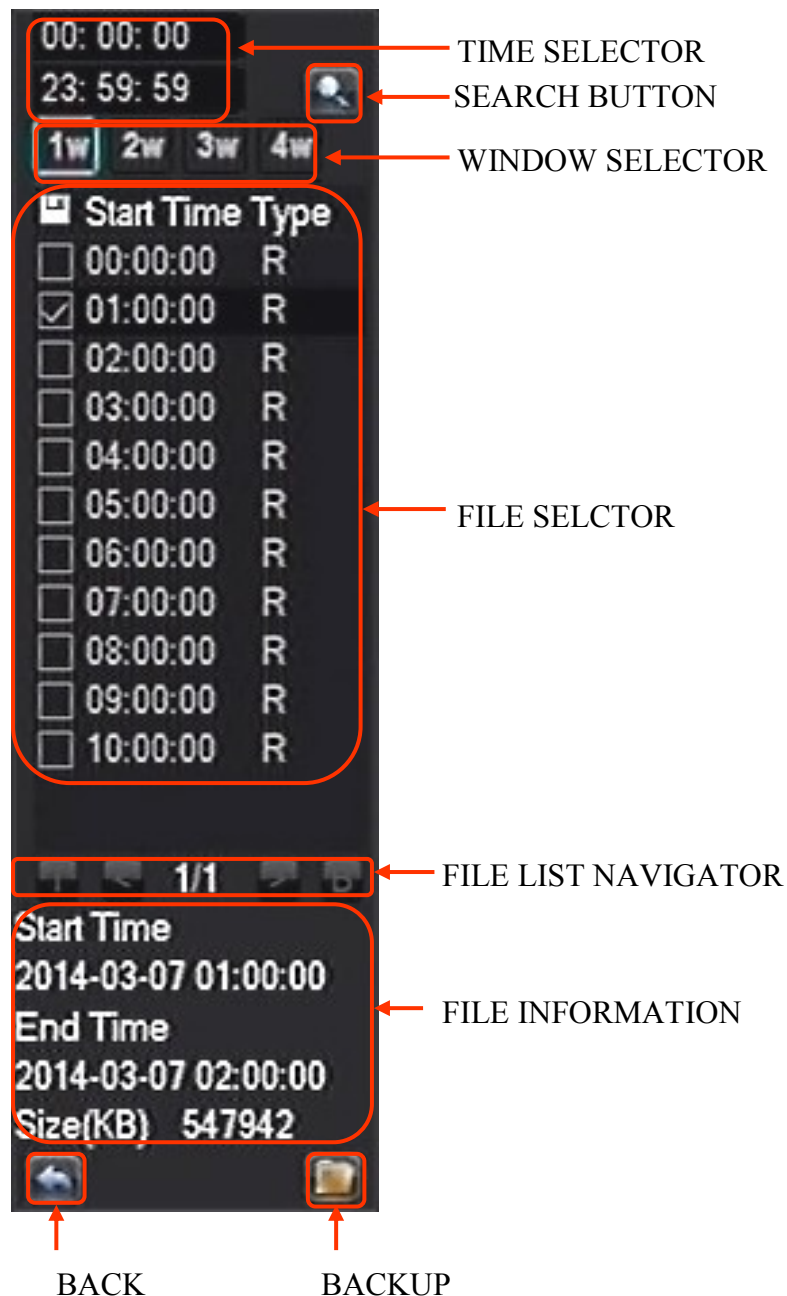
NVR MENU

In this window you can view recording by selected channel and time. In calendar section days for which the recorder contains the recordings are highlighted in green. Press left mouse button on desired day. Then select desired channels numbers to display. Time graph should be displayed showing recordings for selected channels. (When you choose more than 4 channels only one time graph is displayed showing recording from active window). Colours on the graph represents the type of recordings.(Green - Normal ,Pink-Alarm,Yellow-Motion detection).

To start playback, press the graph at the selected time or press play button to start playing from the beginning of that day. It is possible to synchronize time of playback or you can view up to 4 channels with independent time selection.

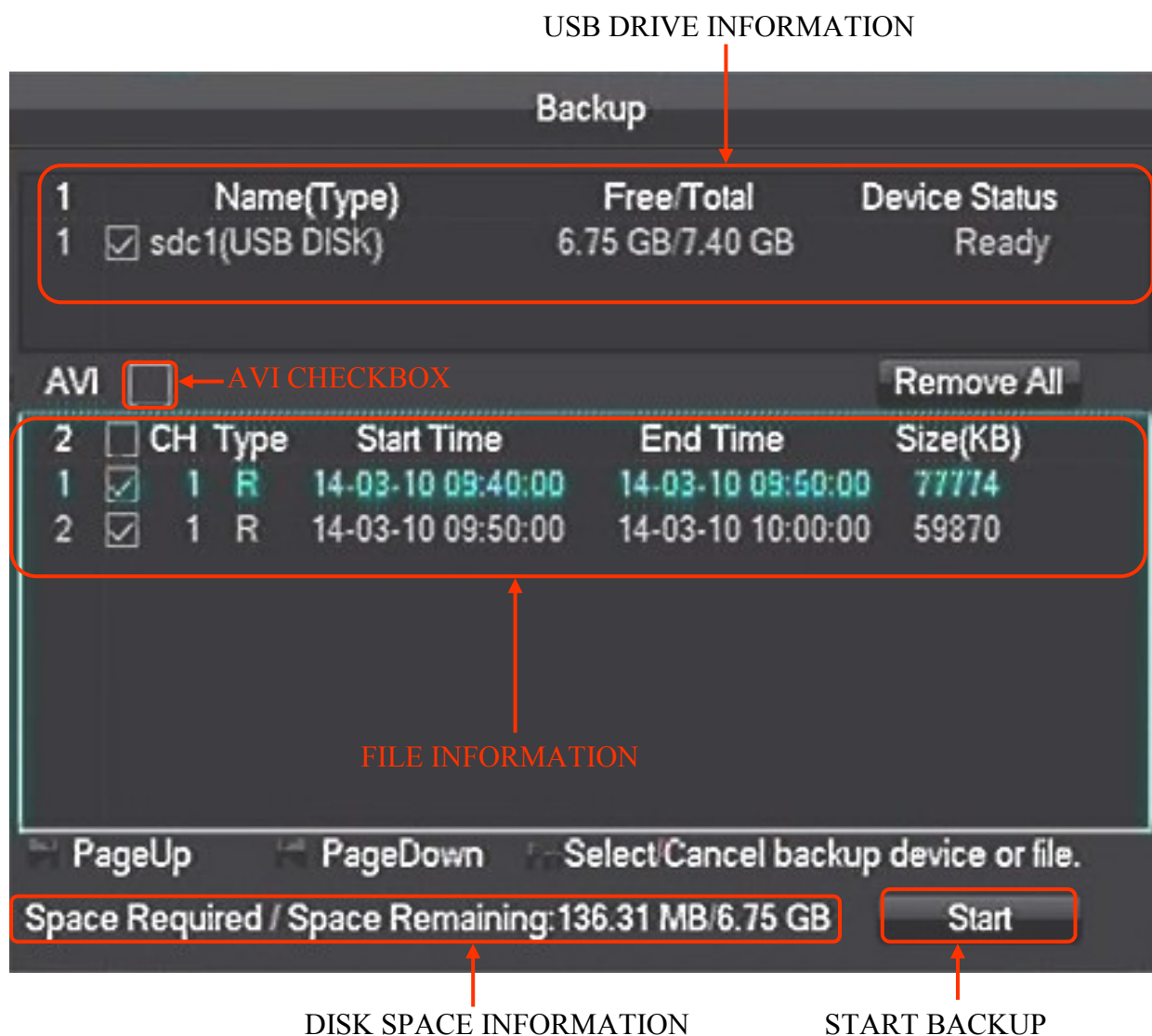
4.4. Backup

Users may copy recordings via USB into flash memories. NVRs allow to copy files the recordings in following formats: AVI, DAV. To find the files for copying, select that displays file list button.



NVR MENU

From the top you can select time range and press search button to display files from that range. When you click on the file at the bottom of the file list displays information about the start and end time of the recordings, and file size. Click on the checkbox to the left of the file in file selector window to set it as a file to backup. You can select multiple files from different channels. When you make a selection insert USB stick into USB port, and press the backup button to open backup menu.



At the top of the menu, you should see information about the USB device. You can check the AVI checkbox to save recordings in AVI format. The window below displays information about the files of the selected for the recording. If a USB drive is not enough space, you can deselect files for recording. After file selection is done press *START* button to start copying files. During this time you will see a progress bar and estimated remaining time to completion of the operation. After copying message will be displayed informing on end of the backup process.

NVR MENU

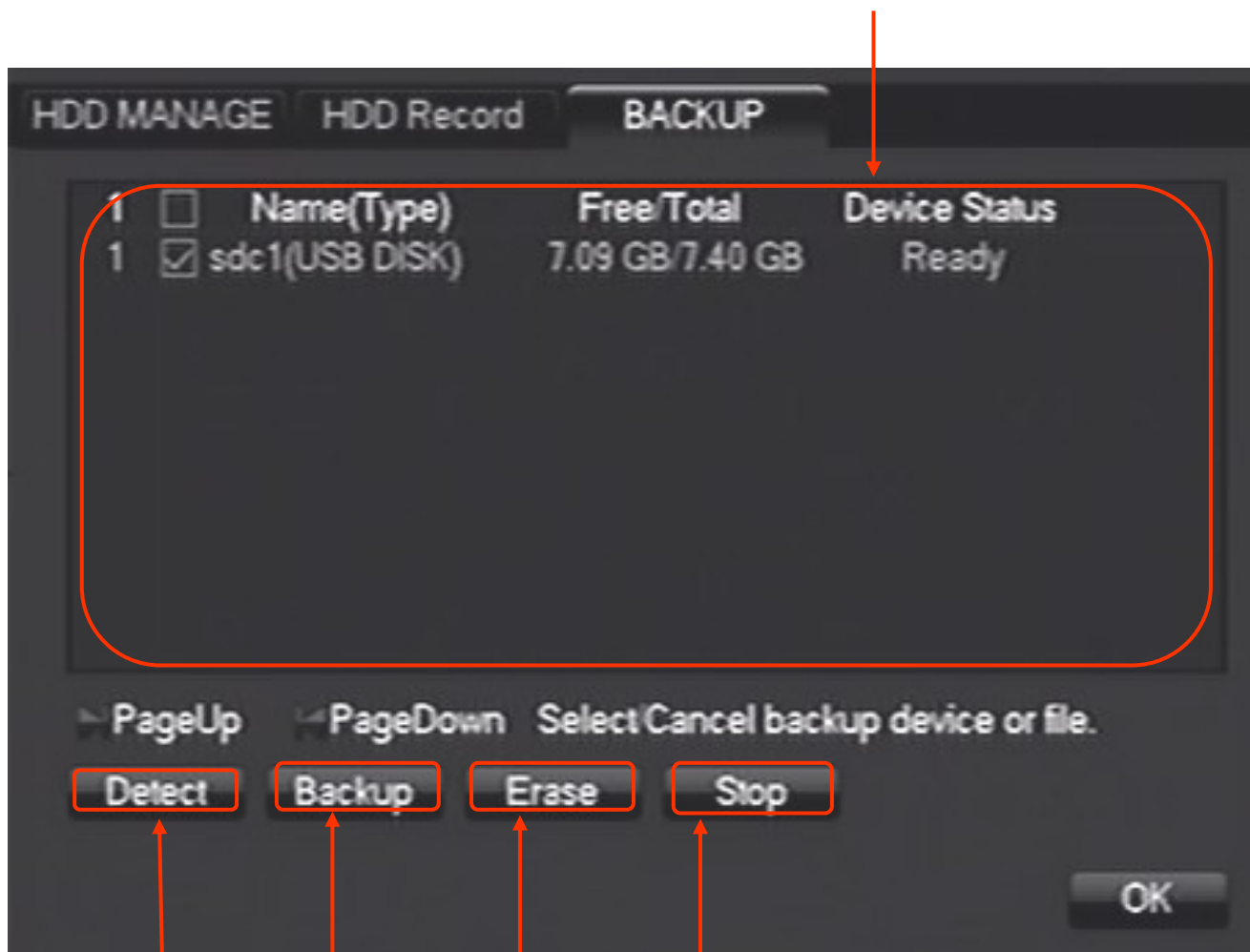
The second method for copying is available by clicking SYSTEM icon form MAIN MENU and then clicking STORAGE icon. Select BACKUP tab to display detected USB devices. Insert pendrive into USB port and press DETECT button. The device should be displayed in device information window. It is possible to format the device by clicking ERASE button.

WARNING :

All stored data are erased during HDD format.

To begging selecting the recordings press BACKUP button.

USB DEVICE INFORMATION



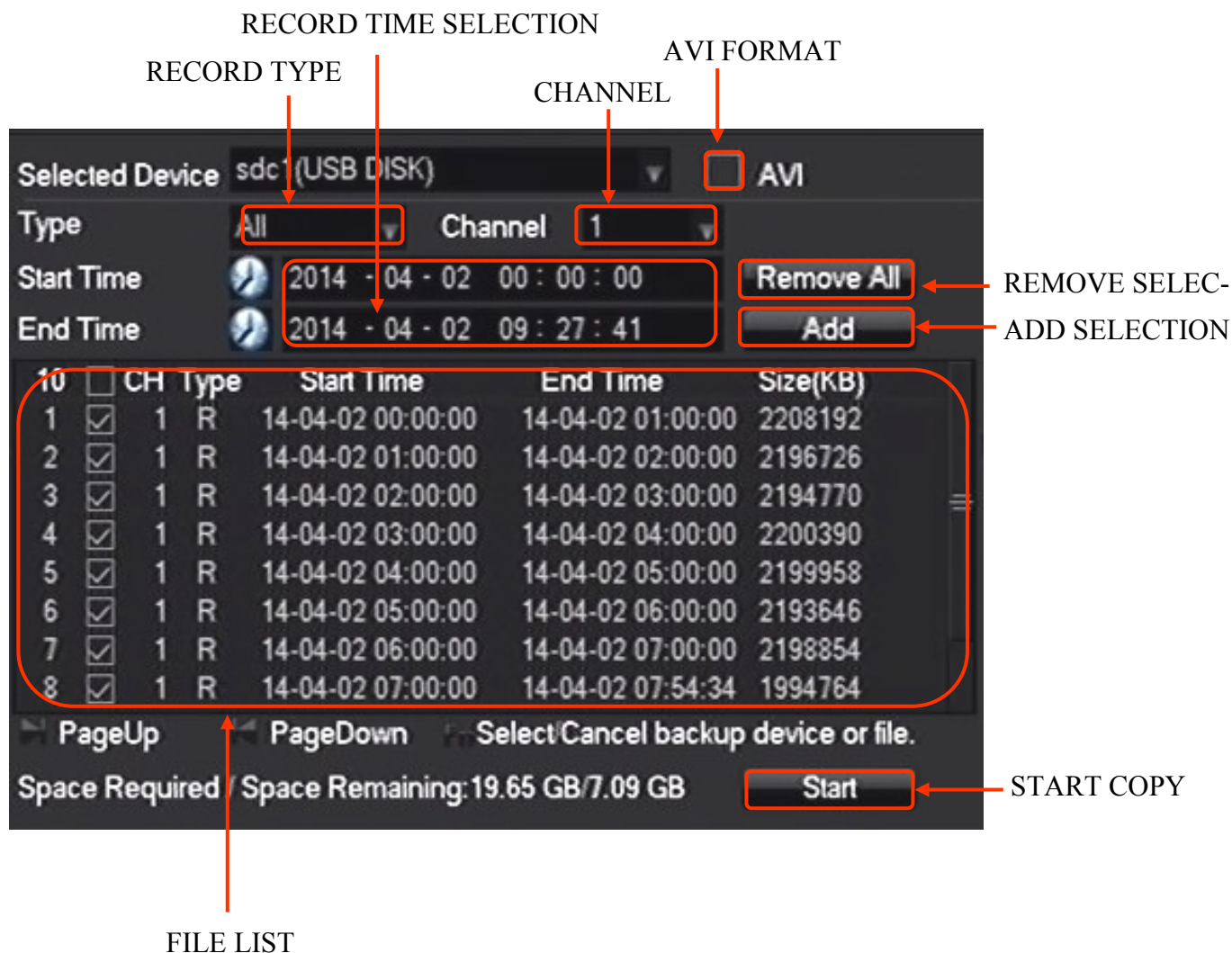
STOP COPYING

FORMAT USB
DEVICE

BACKUP

USB DEVICE DISCOVERY

NVR MENU



BAKUP window allows selecting recordings by :

- date and time of the recordings
- recording type
- Channel

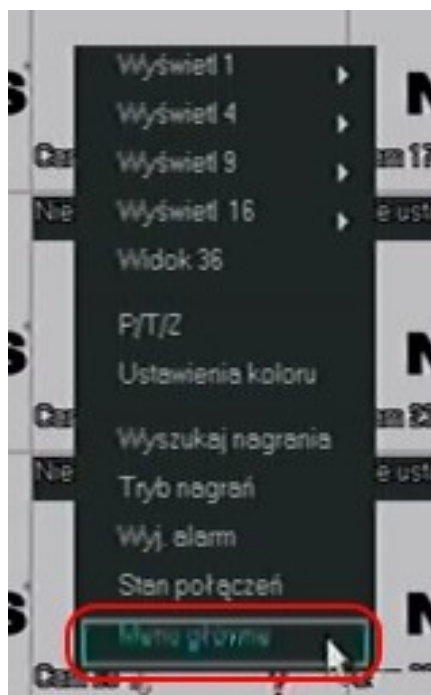
Select the above parameters and press ADD button to add files to file list. The warning message appear if the recorder is unable to find the recordings. It is possible to add files to list several time. REMOVE ALL button clears file selection list. Checking AVI checkbox enables saving records in AVI format. After completing the selection press STRT button to begin copying process. At the bottom of the window bar displaying copying progress should be displayed. The process ended with displaying the window indicating the success of the backup.

NVR MENU

4.5 Setting English language

The procedure presented below shows how to go back to the English language in the NVR menu in case of selecting any other language by mistake.

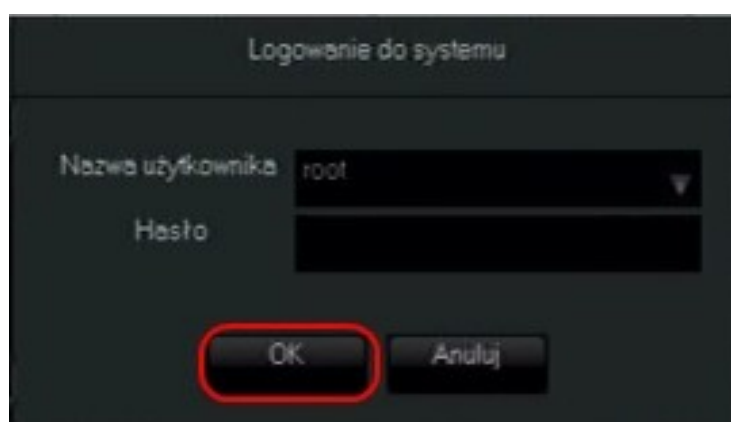
1. Press right mouse button on preview window and select last position from pop-up menu.



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2. Log in to the NVR with corresponding password for the user who has permissions to change system settings. Press left button to log in.

The default data to the user's login is : user root , password : pass



NVR MENU

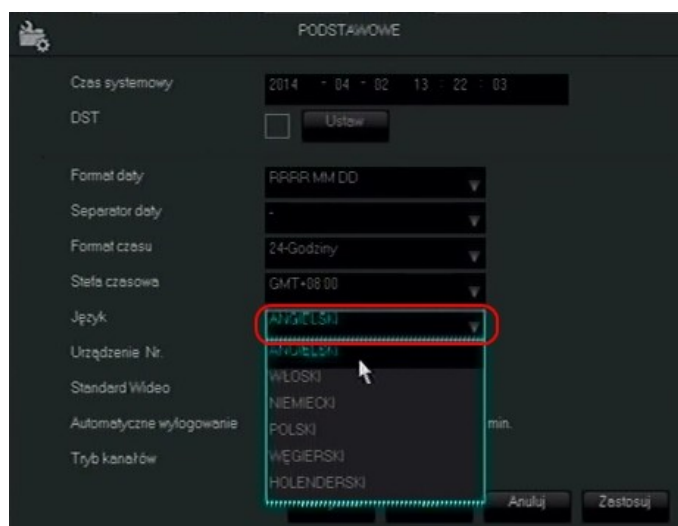
3. Select second icon from right in bottom row.



4. Select first icon from the left in the upper row.

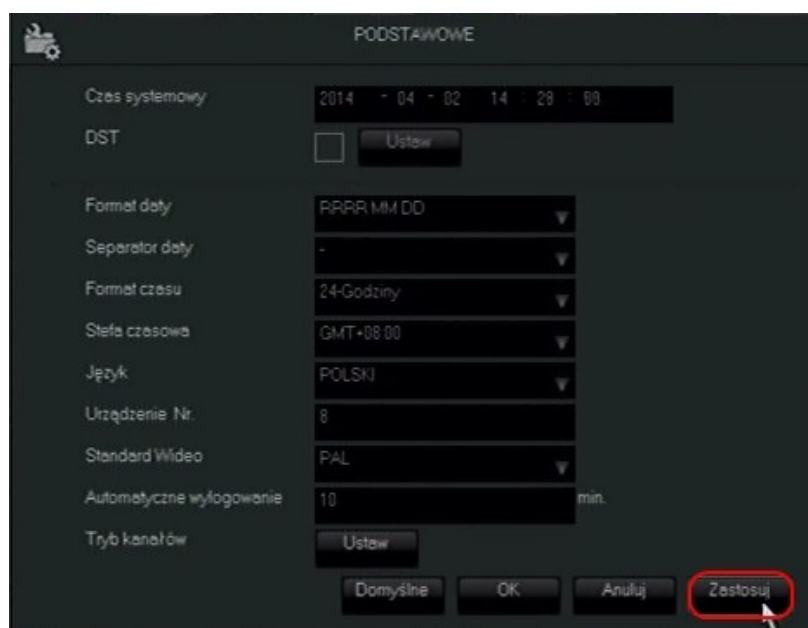


5. Select the seventh menu position from the top and from the drop-down list, select the first item.

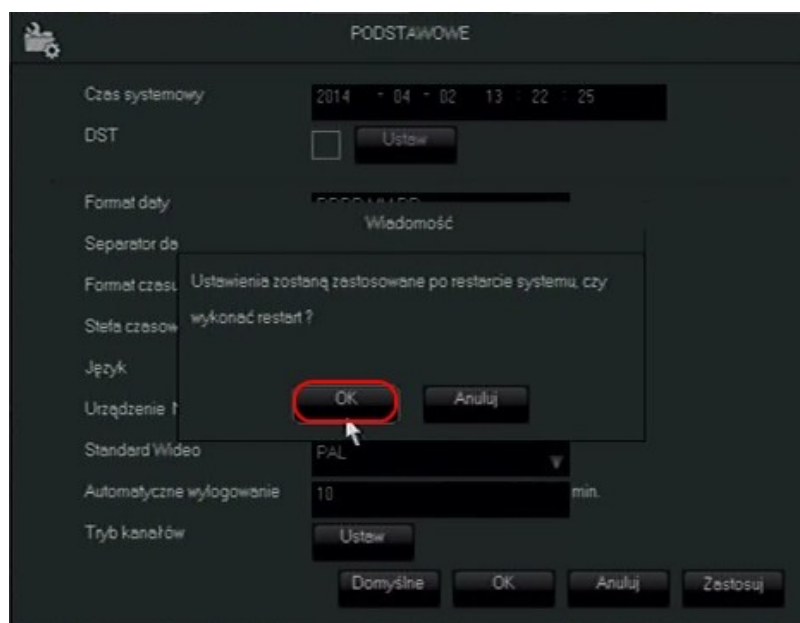


NVR MENU

6. Select the first button on the right bottom of the window



7. When the confirmation windows appear select right button. NVR will reboot. After restarting English language should be set.



Detailed information about configuration, service and installation of device is available in full version of user's manual located on the attached CD-ROM and on the www.novuscctv.com



2014-04-04 MB MK